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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,751	07/31/2002	Karl-Willic Hoel	48046/DBP/T164	2804
23363 7590 01/26/2007 CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			EXAMINER WILL, THOMAS B	
			ART UNIT	PAPER NUMBER
			3671	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/26/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/089,751

Applicant(s)

HOEL, KARL-WILLIE

Examiner

Christopher R. Buchanan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-32, 37-43, and 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 5,819,852) alone.

Regarding claim 27, Cunningham discloses a subsea device (Figs. 1 and 2) for attachment to a subsea Christmas tree (14, Fig. 2) comprising at least one tree passage (68, 70) therethrough, the device including:

- A pressure control device (76, 78, 80),
- A tool housing assembly (generally 52 and 54; column 3 lines 46-50) positioned above the pressure control device,
- A sealing assembly (58) positioned above the tool housing assembly which could be adapted to seal around a tool lowering means,
- At least one lubricator passage (52, 60, 64, 68, 54, 62, 66, 70) which communicates with at least one tree passage in the subsea Christmas tree (Fig. 2); and

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- At least one bypass assembly (82) comprising at least one bypass passage which communicates with at least one tree passage (68) in the subsea Christmas tree (14).

The device of Cunningham differs from the claimed invention in that it is not explicitly stated to be a lubricator, however, the device discloses the features of the claimed invention and could perform the same operations. Therefore, it could effectively be considered a lubricator.

Regarding claim 28, Cunningham discloses the at least one bypass assembly (82) further comprising at least one lower bypass pipe (Fig.2, below 84), and at least one upper bypass pipe (Fig. 2, above 84) removably connected to the at least one lower bypass pipe (by disconnection of riser safety package 24).

Regarding claim 29, the examiner gave official notice in the non-final rejection dated April 4, 2006 that having a bypass assembly comprise at least two upper bypass pipes would have been obvious to one of ordinary skill in the art since it is known in the hydrocarbon drilling and production arts to couple as many lengths of piping are necessary to achieve a tubular structure of a given length. Since applicant has not traversed this assertion, the official notice henceforth will be considered admitted prior art.

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Regarding claim 30, Cunningham discloses the subsea lubricator further comprising a tool housing portion (generally 52 and 54; column 3 lines 46-50) comprising an upper end and a bore (52, 54, 64, 66) which defines a portion of the at least one lubricator passage, the bypass assembly further comprising a crossover assembly (72) for fluidly connecting the at least one upper bypass pipe with at the at least one lubricator passage at a location proximate the upper end of the tool housing portion (26) (Fig. 1).

Regarding claim 31, Cunningham further discloses a pressure control assembly (76, 78, 80) disposed generally below the tool housing portion, the pressure control assembly comprising a lower end, a bore (64) which defines a portion of the lubricator passage, and at least one pressure control valve (76, 78, 80) for selectively closing the lubricator passage, the bypass assembly further comprising a valve assembly (84) for fluidly connecting the at least one lower bypass pipe with the lubricator passage at a location below the at least one pressure control valve (Fig. 2).

Regarding claim 32, the crossover assembly (72) further comprising a connector (inherent in umbilical 32, see column 5 lines 3-8) for fluidly connecting the crossover assembly to an external fluid source.

Regarding claim 37, the lubricator further comprises an adaptor (26), the valve assembly (84) forming a portion of the adapter (Figs. 1 and 2).

Regarding claim 38, the adaptor (26) is removably attached to the pressure control assembly (76, 78, 80), the adaptor (26) comprising a subsea connector adapted for connection to the subsea Christmas tree (14).

Regarding claim 39, the subsea Christmas tree (14) further comprises a production passage (68) and an annulus passage (70), the adaptor (26) further comprising a first adaptor passage (64) for fluidly connecting the at least one lubricator passage with the production passage (68) in the subsea Christmas tree (14), and a second adaptor passage (66) for fluidly connecting the at least one lower bypass pipe with the annulus passage (70) via crossover assembly (72) in the subsea Christmas tree (14).

Regarding claim 40, the subsea Christmas tree (14) further comprises a production passage (68) and a an annulus passage (70), the adaptor (26) further comprising a first adaptor passage (66) for fluidly connecting at least one lubricator passage with the annulus passage (70) in the subsea Christmas tree (14), with a second adaptor passage (64) for fluidly connecting the at least one lower bypass pipe with the production passage (68) in the subsea Christmas tree (Fig. 2).

Regarding claim 41, the lubricator inherently comprises a valve actuator (column 5 lines 3-9).

Regarding claim 42, Cunningham discloses a method for circulating fluid in a subsea device attached to a subsea Christmas tree (14) landed on a subsea well, the method comprising:

- Providing at least one bypass passage (82) fluidly connecting the subsea device to the subsea Christmas tree (14);
- Connecting the subsea device to a source of first external fluid (column 6 lines 22-25);
- Injecting the first external fluid into the subsea device to displace a first internal fluid within the subsea lubricator; and
- Circulating the first internal fluid to the subsea well through the bypass passage and the subsea Christmas tree (column 6 lines 22-25).

The device of Cunningham differs from the claimed invention in that it is not explicitly stated to be a lubricator, however, the device discloses the features of the claimed invention and could perform the same operations. Therefore, it could effectively be considered a lubricator. Furthermore, given the features of the device of Cunningham discussed in the rejection of claims 27-32 above, the features of the claimed method recited in claims 42-48 would be inherent.

Regarding claim 43, the first external fluid comprises water (column 6 lines 22-23).

Regarding claim 49, Cunningham discloses a method for injecting fluid into a well that may be used to kill the well, the well having a subsea Christmas tree (14) landed thereon, the method comprising:

- Landing a subsea device on said subsea tree (32), said subsea device comprising at least one valve (76, 78, 80, 74, 84);
- Providing at least one bypass passage (82) fluidly connecting the subsea tree with a source of kill fluid; and
- When said at least one valve (80) is closed, injecting said kill fluid into said well through said bypass passage (82) and the subsea tree (column 6 lines 22-25).

The device of Cunningham differs from the claimed invention in that it is not explicitly stated to be a lubricator, however, the device discloses the features of the claimed invention and could perform the same operations. Therefore, it could effectively be considered a lubricator. Furthermore, given the features of the device of Cunningham discussed in the rejection of claims 27-32 above, the features of the claimed method recited in claims 49 would be inherent.

Regarding claim 50, Cunningham discloses a method of circulating fluids in a subsea well, the method comprising the apparatus of claim 40, and comprising the step of

- Connecting a first supply pipe (50) to a first passage (60);
- Connecting a second supply pipe (32) to the lower bypass passage; and
- Circulating fluid from a second supply pipe, through the lower bypass pipe (below 84), through the annulus passage (66), down into the well through the tubing annulus, through the downhole fluid connection (72), up through the tubing string, through the production passage, through the first passage (64) in the pressure control assembly, and into the first supply pipe (50) (column 6 lines 22-25).

Cunningham does not explicitly state all the features of the claimed method, however, given the features of the device of Cunningham discussed in the rejection of claims 27-32 above, the features of the claimed method recited in claim 50 would be inherent.

Regarding claim 51, Cunningham a method of circulating fluids in a subsea well, the method comprising the apparatus of claim 40, and comprising the step of
Connecting a first supply pipe (50) to a first passage (60);
Connecting a second supply pipe (32) to the lower bypass passage; and
Circulating fluid from a first supply pipe (50), through the first passage (64) in the pressure control assembly, through the production passage (64), down into the

well through the tubing string, through the downhole fluid connection (67), up the tubing annulus (70), through the annulus passage (66), and into the second supply pipe (32) (column 6 lines 22-25).

Cunningham does not explicitly state all the features of the claimed method, however, given the features of the device of Cunningham discussed in the rejection of claims 27-32 above, the features of the claimed method recited in claim 51 would be inherent.

Regarding claim 52, Cunningham discloses a device for attachment to a subsea Christmas tree having the structure of claim 27, and further comprising:

A fluid connection between the at least one upper bypass pipe (above 82) and the device passage (52) at an upper end of the tool assembly (52), the fluid connection comprising a crossover having a connector for attachment of an external fluid supply source (32).

The device of Cunningham differs from the claimed invention in that it is not explicitly stated to be a lubricator, however, the device discloses the features of the claimed invention and could perform the same operations. Therefore, it could effectively be considered a lubricator.

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3. Claims 33, 35, 36, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 5,819,852) in view of Robertson (US 6,360,822).

Regarding claim 33, Cunningham discloses a lubricator as described above, including a subsea Christmas tree (14) comprising a production passage (68) and an annulus passage (70), the valve assembly further comprising a first inlet fluidly connected to the at least one lower bypass pipe (below 84, Fig. 2) and a second fluid inlet (inherent in umbilical 32, see column 5 lines 3-8) fluidly connected to a subsea umbilical (32). Cunningham fails to disclose first and second fluid outlets connected to the production and annulus passages, respectively.

Like Cunningham, Robertson discloses a subsea Christmas tree (Fig. 3) comprising a production passage (35) and an annulus passage (38). Unlike Cunningham, Robertson discloses a first outlet (36) fluidly connected to the production passage (35) and a second outlet (38) fluidly connected to the annulus passage (38) in the subsea Christmas tree.

Given the suggestion in Robertson, it would have been obvious to one of ordinary skill in the art to include first and second outlets on the subsea Christmas tree (Cunningham; 14) of Cunningham as taught in Robertson to allow fluids from the production bore and annulus to be connected to subsea flow lines or jumpers, thereby allowing an additional flow path for hydrocarbons and injected fluids in case the riser passage is disconnected or sealed.

Regarding claims 35 and 36, Robertson discloses a stop valve (37, 40) disposed in the first and second outlets, respectively.

Regarding claim 53, the limitations therein have been described above in the rejection of claim 33.

Regarding claim 54, the limitations therein have been described above in the rejection of claims 33 and 37.

4. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 5,819,852) in view of Robertson (US 6,360,822) as applied to claim 33 above, and further in view of Cowan (GB 2,233,365).

Cunningham and Robertson disclose a combination of lubricators as described above, including first and second inlets (Cunningham; near 32 and below 84), the inlets having first (84) and second (inherently, see column 6 lines 8-11) valves. The combination fails to disclose the valves being check valves.

Like the combination, Cowan discloses a lubricator, including first and second inlets (108, 109). Unlike the combination, Cowan discloses the valves being check valves (114).

Given the suggestion in Cowan, it would have been obvious to one of ordinary skill in the art to include check valves on the inlets of the combination to ensure flow in the proper direction during operation of the lubricator.

5. Claims 44, 45, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 5,819,852), in view of Doremus et. al. (US 4,658,904).

Regarding claim 44, Cunningham discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid. Cunningham fails to disclose using a hydrate inhibitor as the first external fluid.

Like Cunningham, Doremus discloses a method of circulating fluid in a subsea intervention device. Unlike Cunningham, Doremus discloses using a hydrate inhibitor (column 5 lines 21-24) as the external fluid.

Given the suggestion in Doremus, it would have been obvious to one of ordinary skill in the art to modify Cunningham as taught in Doremus by using a hydrate inhibitor as the external fluid to prevent the formation of hydrates (column 13 lines 49-53), thereby preventing hydrocarbon solids from blocking the narrow passages of the lubricator.

Regarding claim 45, it is commonly known in the art that methanol and glycol are standard hydrate inhibitors.

Regarding claims 47 and 48, Cunningham discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid comprising water and a first internal fluid. The internal fluid could inherently be water (claim 47) or produced hydrocarbons (claim 48). Cunningham further discloses umbilicals capable of handling injection of a second external fluid (column 5 lines 3-8) (claim 48). Cunningham fails to disclose using a hydrate inhibitor as the first external fluid.

Like Cunningham, Doremus discloses a method of circulating fluid in a subsea intervention device, including a first internal fluid and a first external fluid. Unlike the combination of Cowan and Coutts, Doremus discloses using a hydrate inhibitor (column 5 lines 21-24) as the external fluid.

Given the suggestion in Doremus, it would have been obvious to one of ordinary skill in the art to modify the combination of Cowan and Coutts as taught in Doremus by using a hydrate inhibitor as the external fluid to prevent the formation of hydrates (column 13 lines 49-53), thereby preventing hydrocarbon solids from blocking the narrow passages of the lubricator.

6. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cunningham et al. (US 5,819,852) in view of Coutts (WO 93/03254).

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Cunningham discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid. Cunningham fails to disclose using a diluent fluid as the first external fluid.

Like Cunningham, Coutts discloses a method of circulating fluid in a subsea intervention device. Unlike Cunningham, Coutts discloses using barites mud or brine (page 15 lines 6-7) as the external fluid.

Given the suggestion in Coutts, it would have been obvious to one of ordinary skill in the art to using a diluent fluid such as barites mud or brine in the circulation method of Cunningham so that sands or other particulate matter can be cleaned up by the circulation procedure.

Response to Arguments

7. Applicant's arguments filed September 5, 2006 have been fully considered but they are not persuasive. The points of applicant's arguments are addressed in the modified rejection above and the examiner stands by the rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

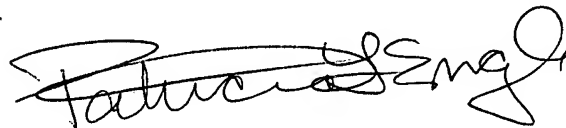
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Buchanan whose telephone number is 571-272-8134. The examiner can normally be reached on Mon.-Fri. 9:00am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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